



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,087	10/01/2001	Lan Chen	214470US2	5393
22850	7590	11/09/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EWART, JAMES D	
			ART UNIT	PAPER NUMBER
			2683	

DATE MAILED: 11/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/966,087	Applicant(s) CHEN ET AL.	
	Examiner James D. Ewart	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Request for Cont. Examination 10-07-05.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4-6,8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4-6,8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Application/Control Number: 09/966,087

Art Unit: 2683

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09-07-2005 has been entered.

Response to Arguments

2. Applicant's arguments filed 09-07-2005 have been fully considered but they are not persuasive.

3. Regarding Applicant's argument that Gilbert does not teach using empirical data alone, the claim states allocation based on empirical data. Gilbert teaches observing several different system parameters in order to adaptively and dynamically change the channel time slot ratio based on the varying bandwidth requirements (Column 13, Lines 13-18). Empirical is defined as based or characterized by observation. Examiner equates Gilberts method of bandwidth allocation with empirical data since it is based on observation. In addition, Applicant admits that Gilbert teaches incorporating the present data into past data successively so as to accumulate moment data along the time axis to obtain bandwidth utilization parameters. Examiner equates the past data with empirical data. The past data also reflects the empirical data corresponding to the present time since it is a weighing factor of the current allocation and becomes the current

Application/Control Number: 09/966,087

Art Unit: 2683

allocation when the traffic parameters remain the same. Examiner equates the present data with the current ratio between traffic of the uplink and traffic of the downlink based on current traffic.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2,4,8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al. (U.S. Patent No. 6,016,311) and further in view of Inata (U.S. Patent No. 5,910,953).

Referring to claims 2 and 8, Gilbert et al. teaches a method of allocating radio resources, in a base station, to the base station and a mobile station (Column 4, lines 3-6 and Column 5, Lines 41-48), comprising the steps of: obtaining a ratio (Column 7, Lines 9-12) between traffic of an uplink and traffic of a downlink (Column 4, Lines 57-65; Column 5, Lines 30 – 57 and Column 15, Lines 22-45); allocating the radio resources to the uplink and the downlink for the mobile station according to the obtained ratio (Column 4, Lines 54-65 and Column 5, Lines 48-52) and dividing time into a plurality of time periods (Column 15, Lines 9-12), and allocating empirical data regarding traffic of the uplink and traffic of the downlink to the respective time periods (Column 15, Lines 9-12, wherein said step of obtaining a ratio obtains the ratio (Column 7, Lines 9-12) based on empirical data corresponding to a present time period (Column 7, Line

Application/Control Number: 09/966,087

Art Unit: 2683

66 to Column 8, Line 14, Column 15, Lines 9-14 and Column 16, Lines 1-3) and a current ratio between traffic of the uplink and traffic of the downlink based on current traffic (Column 5, lines 36-44 and Column 16, Lines 1-45) , but does not teach wherein the time period corresponds with at least one of days of a week and hours of a day. Inata teaches wherein the time period corresponds with at least one of days of a week and hours of a day (Column 5, Lines 4-16).

Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Gilbert et al. with the teaching of Inata wherein the time period corresponds with at least one of days of a week and hours of a day to allocate resources to accommodate traffic changes in the cells (Column 5, Lines 4-5).

Referring to claims 4 and 10, Gilbert et al. further teaches obtaining the current ratio between traffic of the uplink and traffic of the downlink based on current traffic (Column 15, Lines 6-12 and Column 15, Lines 27-45 and Column 18, Lines 41-53) and obtaining a weighted average of the empirical data corresponding to the present time period and the current ratio by weighing the empirical data and the current ratio with respective weighting factors (Column 16, Lines 1-45), wherein said step of allocating the radio resources allocates the radio resources to the uplink and the downlink according to the weighted average (Column 4, Lines 54-65 and Column 5, Lines 48-52)

5. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al. and Inata and further in view of Baden et al. (U.S. Patent No. 6,353,598).

Referring to claims 5 and 11, Gilbert et al. and Inata teach the limitations of claims 5 and 11, but do not teach transmitting, to the mobile station, information about the radio resources with respect to at least one of the uplink and the downlink. Baden et al. teaches transmitting, to the mobile station, information about the radio resources with respect to at least one of the uplink and the downlink (Column 2, Lines 64-66). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Gilbert et al. and Inata with the teaching of Baden et al. transmitting, to the mobile station, information about the radio resources with respect to at least one of the uplink and the downlink so that each mobile station entering a cell is provided with the traffic ratio ((Column 2, Lines 65-67).

6. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al. and Inata and further in view of Yun (U.S. Patent No. 6,463,295).

Referring to claims 6 and 12, Gilbert et al. and Inata teach the limitations of claims 6 and 12, but do not teach allocating transmission power according to communication quality required for the uplink and the downlink. Yun teaches allocating transmission power according to communication quality required for the uplink and the downlink (Column 9, Lines 3-12 and Column 10, Lines 24-34). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Gilbert et al and Inata with the teaching of Yun of allocating transmission power according to communication quality required for the uplink and the downlink for power control methods that use a process for estimating the quality of received signal which is fast, insensitive to frequency offset variations;

Application/Control Number: 09/966,087

Art Unit: 2683

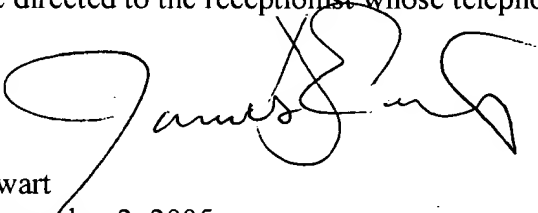
and leads to a measure that differentiates signal from interference and noise (Column 5, Lines 22-27).


Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Ewart whose telephone number is (571) 272-7864. The examiner can normally be reached on M-F 7am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571)272-7872. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2600.


Ewart
November 2, 2005


WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600